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United States
Department of
Agriculture

Forest Service

North Central
Forest Experiment
Station

Research Note **NC-370**
1996

Pulpwood Production in the Lake States, 1995

Ronald J. Piva [1]

ABSTRACT.—Pulpwood production in the Lake States decreased from 9.7 million cords in 1994 to 9.6 million in 1995. Michigan, Minnesota, and Wisconsin pulpwood production is shown by county and species group.

KEY WORDS: Residue, roundwood, whole tree chips, Minnesota, Michigan, Wisconsin.

Pulpwood production[2] in the Lake States—Michigan, Minnesota, and Wisconsin—decreased to 9.6 million cords in 1995 from 9.7 million cords in 1994[3]. Wisconsin produced 3.5 million cords, Michigan produced 3.1 million cords, and Minnesota produced 3.0 million cords in 1995 (table 1). Ninety-two percent of the pulpwood produced came from roundwood (including chips from roundwood); the remainder came from mill residues such as slabs, edgings, veneer cores, and chips from these materials (fig. 1).

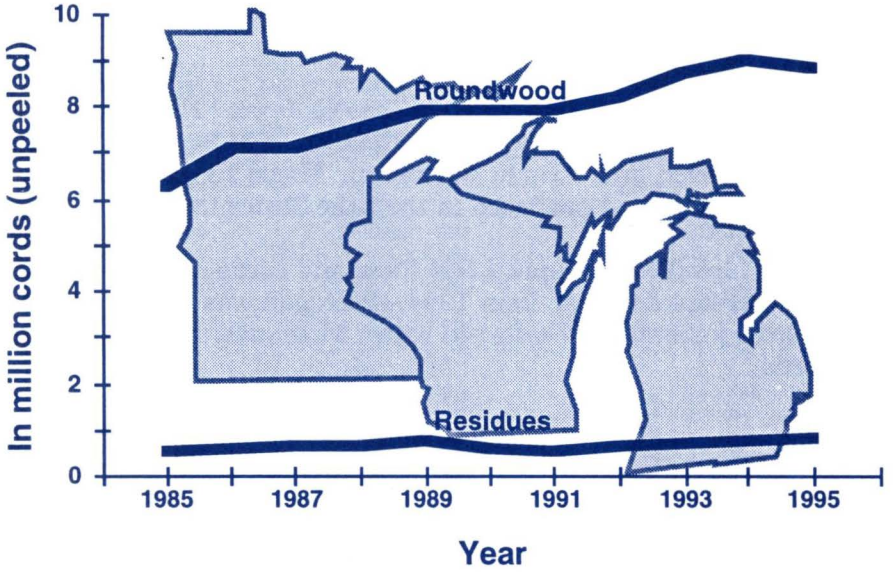

Figure 1.—*Pulpwood production, Lake States, 1985-1995.*

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ROUNDWOOD

Roundwood production totaled 8.8 million cords; Michigan and Minnesota each produced 2.8 million cords and Wisconsin produced the remaining 3.1 million cords. Seventy-eight percent of the harvested species were hardwoods. Aspen accounted for 49 percent of the total production (4.3 million cords). The other major species groups were maple (1.2 million cords), pine (1.2 million cords), spruce-fir (0.6 million cords), and birch (0.6 million cords) (fig. 2).

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[2] *Includes logs, bolts, and wood residue used in manufacturing particleboard, wafer board, oriented strand board, hardboard, and medium density fiberboard.*

[3] *Previous year's data are from "Pulpwood Production in the Lake States, 1994," Research Note NC-368, 1996.*

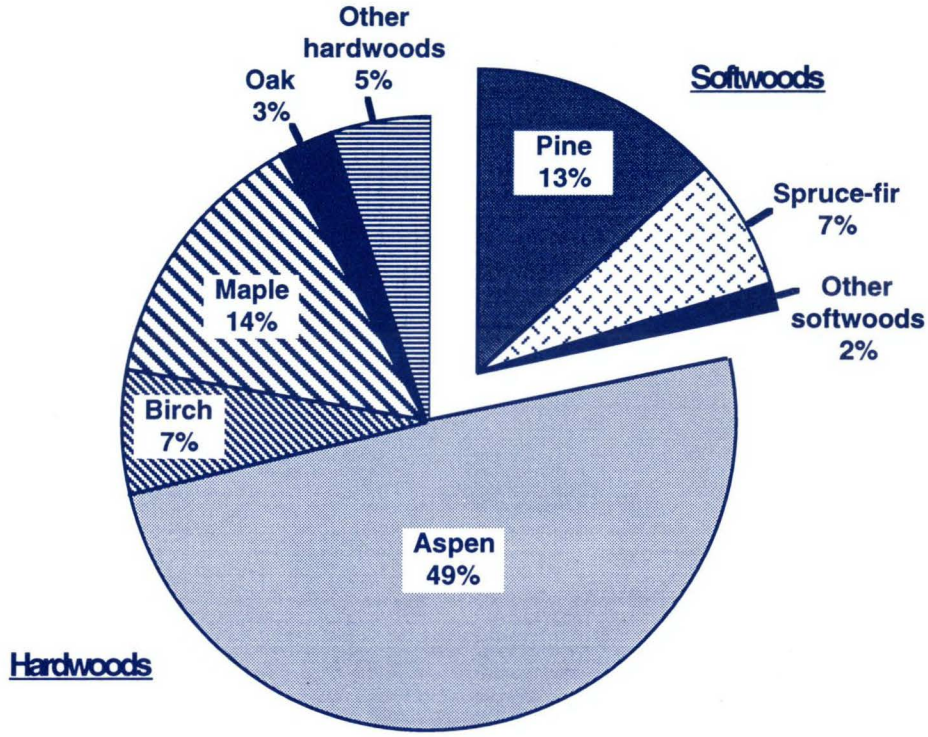

Figure 2.—*Distribution of roundwood production by major species group, Lake States, 1995.*

Counties harvesting more than 150 thousand cords each were Houghton, Iron, and Marquette in Michigan; Beltrami, Cass, Itasca, Koochiching, and St. Louis in Minnesota; and Bayfield, Douglas, Iron, Sawyer, and Vilas in Wisconsin. These 13 counties contributed 38 percent of the roundwood pulpwood produced in the Lake States in 1995.

In 1995, whole tree chips (WTC) supplied 564 thousand cords or 6 percent of the roundwood production, a 17-percent decrease from 1994. Michigan was the major WTC producer with 340 thousand cords, followed by Wisconsin with 134 thousand cords, and Minnesota with 90 thousand cords.

MILL RESIDUES

Pulpwood production from mill residues amounted to 804 thousand cords in 1995, a 6-percent increase over 1994. Mill residue production increased by 15 percent in Michigan and by 6 percent in Wisconsin, but decreased by 5 percent in Minnesota. Production from softwood and hardwood residues by State was:

State	Softwood	Hardwood
	(Thousand standard cords, unpeeled equivalents)	
Michigan	90	188
Minnesota	64	97
Wisconsin	191	174

Tabel 1.--Lake States pulpwood production from roundwood by county and species group, 1995 1/

(In standard cords, unpeeled)

MINNESOTA

Unit and county 2/	All species	Species group: N. white-cedar	Balsam fir	Hemlock	Pine	Spruce	Tamarack	Aspen	Birch	Maple	Oak	Other hardwoods
Aspen-Birch												
Carlton	55,090	-	8,938	-	3,697	2,130	141	26,812	11,501	1,470	20	381
Cook	31,122	-	4,705	-	1,835	10,096	172	10,131	4,086	70	-	26
Koochiching	461,192	-	28,167	-	6,728	49,840	7,081	324,602	1,157	399	37	43,181
Lake	112,373	-	11,211	-	5,778	16,751	990	55,771	16,698	2,430	4	2,740
St Louis	602,842	-	66,029	-	22,179	39,271	2,192	413,845	31,422	4,771	-	23,133
Total	1,262,618	-	119,051	-	40,219	118,088	10,575	831,161	64,862	9,141	61	69,460
Northern Pine												
Aitkin	100,280	-	5,111	-	1,859	1,314	-	86,705	3,553	505	4	1,228
Becker	75,887	-	882	-	1,890	-	-	71,833	836	-	-	445
Beltrami	178,869	-	4,815	-	5,436	5,812	1,175	146,345	6,403	149	-	8,735
Cass	180,619	-	7,699	-	10,020	920	-	152,106	6,460	551	-	2,862
Clearwater	80,357	-	2,370	-	984	510	-	73,578	1,691	-	-	1,224
Crow Wing	65,206	-	-	-	6,963	19	-	57,438	766	-	-	20
Hubbard	108,406	-	490	-	6,778	75	-	93,886	4,639	233	109	2,195
Itasca	357,459	-	52,884	-	8,969	19,652	73	252,011	13,466	2,066	4	8,335
Lake of the Woods	50,480	-	2,088	-	10,443	1,929	57	34,915	51	-	-	996
Mahnomen	15,083	-	-	-	16	-	-	14,987	10	-	-	69
Roseau	28,742	-	13	-	8,132	384	198	19,205	3	-	-	808
Wadena	21,161	-	-	-	3,415	64	-	17,638	21	-	-	22
Total	1,262,547	-	76,351	-	64,905	30,678	1,503	1,020,648	37,901	3,504	117	26,940
Central Hardwood												
Anoka	541	-	-	-	463	11	-	66	-	-	-	-
Benton	531	-	-	-	353	-	-	178	-	-	-	-
Chisago	1,932	-	-	-	1,733	125	-	10	14	20	16	14
Douglas	1,512	-	-	-	13	-	-	1,499	-	-	-	-
Goodhue	631	-	-	-	-	-	-	631	-	-	-	-
Isanti	1,383	-	-	-	1,346	16	-	21	-	-	-	-
Kanabec	15,984	-	-	-	483	-	-	15,419	74	-	-	8
Mille Lacs	48,773	-	-	-	990	-	-	47,439	211	121	-	11
Morrison	13,912	-	314	-	863	93	-	12,219	390	28	-	5
Otter Tail	30,414	-	-	-	34	-	-	30,199	99	-	-	82
Pine	117,366	-	2,022	-	8,152	879	52	95,053	7,100	3,922	16	170
Rice	13	-	-	-	13	-	-	-	-	-	-	-
Sherburne	344	-	-	-	336	-	-	9	-	-	-	-
Stearns	144	-	-	-	116	-	-	28	-	-	-	-
Todd	6,171	-	-	-	80	-	-	6,080	10	-	-	1
Wabasha	541	-	-	-	436	-	-	105	-	-	-	-
Washington	1,284	-	-	-	1,209	66	-	10	-	-	-	3/
Winona	279	-	-	-	279	-	-	-	-	-	-	-
Total	241,754	-	2,335	-	16,898	1,190	52	208,964	7,899	4,092	32	292
Prairie												
Clay	3,229	-	-	-	-	-	-	3,229	-	-	-	-
Kittson	5,568	-	-	-	-	-	-	5,561	-	-	-	7
Marshall	11,422	-	-	-	-	-	-	10,941	-	-	-	481
Norman	3,081	-	-	-	-	-	-	3,081	-	-	-	-
Pennington	2,461	-	-	-	-	-	-	2,436	-	-	-	25
Polk	11,879	-	-	-	-	-	88	11,767	12	-	-	13
Red Lake	5,516	-	-	-	-	-	-	5,501	10	-	-	5
Total	43,157	-	-	-	-	-	88	42,516	22	-	-	531
State total	2,810,075	-	197,737	-	122,021	149,956	12,217	2,103,289	110,685	16,738	211	97,222

1/ Table may not add due to rounding.

(Table 1 continued on next page)

2/ Includes only those counties that supplied pulpwood in 1995.

3/ Less than one-half cord.

(Table 1 continued)

MICHIGAN

Unit and county 2/	All species	Species group: N. white-cedar	Balsam fir	Hemlock	Pine	Spruce	Tamarack	Aspen	Birch	Maple	Oak	Other hardwoods
Eastern Upper Peninsula												
Alger	144,926	397	5,454	5,732	17,012	5,516	505	27,816	7,994	62,955	1,509	10,035
Chippewa	104,644	236	4,270	1,624	25,406	3,016	281	32,319	5,368	22,338	427	9,359
Delta	138,878	486	6,579	4,807	27,048	2,684	652	34,319	10,454	42,850	873	8,128
Luce	73,690	119	1,834	5,567	15,766	2,422	261	12,857	3,271	27,191	752	3,648
Mackinac	85,746	244	5,842	1,276	10,367	2,503	219	29,820	6,287	20,061	383	8,744
Menominee	98,558	234	3,998	2,666	5,401	1,661	325	38,656	12,250	26,944	793	5,629
Schoolcraft	127,805	410	5,994	3,071	46,200	8,859	649	16,269	5,399	34,616	888	5,452
Total	774,247	2,127	33,972	24,743	147,199	26,662	2,892	192,057	51,023	236,953	5,624	50,996
Western Upper Peninsula												
Baraga	97,832	76	1,946	3,576	5,476	1,601	428	29,513	8,876	36,642	1,645	8,051
Dickinson	102,490	273	4,914	2,118	9,843	4,346	347	48,091	8,683	18,770	761	4,343
Gogebic	96,719	1	3,064	735	452	5,792	15	22,277	5,490	48,227	3,260	7,406
Houghton	187,379	182	3,242	3,196	10,935	2,918	231	47,126	16,512	81,775	3,523	17,740
Iron	190,684	434	13,803	3,699	16,187	8,824	717	64,778	14,863	54,170	1,941	11,266
Keweenaw	12,780	--	42	43	27	--	--	1,704	1,332	8,573	303	756
Marquette	316,092	1,014	13,960	26,051	53,737	12,395	1,625	75,779	21,184	90,197	1,766	18,384
Ontonagon	144,761	32	2,021	1,499	2,808	3,046	97	78,769	6,927	36,577	1,902	11,082
Total	1,148,734	2,012	42,991	40,917	99,467	38,921	3,460	368,038	83,866	374,930	15,102	79,030
Northern Lower Peninsula												
Alcona	32,135	--	47	--	489	--	--	22,286	2,193	4,435	120	2,567
Alpena	26,887	--	76	--	--	--	--	16,288	1,121	7,978	22	1,401
Antrim	6,062	--	--	--	182	--	--	2,530	543	2,271	97	439
Arenac	10,048	--	--	--	539	--	--	7,135	620	1,420	--	334
Bay	5,928	--	--	--	35	--	--	2,886	414	2,176	87	329
Benzie	19,765	--	--	--	2,739	--	--	6,917	932	5,778	549	2,849
Charlevoix	10,904	--	--	--	338	--	--	3,569	348	3,170	--	3,478
Cheboygan	47,547	113	1,285	--	5,789	447	--	30,311	2,701	5,804	124	974
Clare	37,375	--	--	--	2,638	--	--	25,360	1,508	5,687	338	1,842
Crawford	55,362	--	--	--	26,050	--	--	17,093	1,703	6,419	2,956	1,140
Emmet	29,121	--	--	--	2,329	--	--	9,762	1,230	12,630	--	3,169
Gladwin	11,598	--	--	--	491	--	--	8,524	811	1,220	179	373
Grand Traverse	11,887	--	--	--	3,919	--	--	2,442	444	3,070	548	1,466
Iosco	14,001	--	61	--	568	--	--	8,634	1,714	2,199	47	778
Isabella	20,638	--	--	--	402	--	--	12,284	1,267	4,532	--	2,152
Kalkaska	28,184	15	120	--	5,146	29	--	12,940	1,379	6,045	382	2,128
Lake	28,849	--	--	--	1,344	--	--	10,493	1,191	3,742	10,584	1,497
Leelanau	4,589	--	--	--	47	--	--	1,697	298	1,678	351	518
Manistee	26,389	--	--	--	448	--	--	12,097	1,531	5,962	4,279	2,073
Mason	24,714	--	--	--	--	--	--	13,642	1,633	3,075	5,031	1,333
Mecosta	13,719	--	--	--	438	--	--	10,245	489	1,536	381	628
Midland	13,676	--	--	--	61	--	--	9,237	909	2,777	201	489
Missaukee	28,984	--	--	--	5,801	--	--	16,146	963	4,253	853	969
Montmorency	44,379	5	54	--	804	20	--	27,984	2,169	9,092	595	3,655
Newaygo	29,209	--	--	--	1,236	--	--	11,099	1,308	5,434	7,671	2,462
Oceana	11,299	--	--	--	71	--	--	6,260	775	2,406	574	1,214
Ogemaw	32,396	23	183	--	9,530	44	--	13,031	1,599	3,238	3,494	1,254
Osceola	48,325	--	--	--	212	--	--	25,953	2,806	9,093	6,091	4,171
Oscoda	30,223	--	53	--	9,334	41	--	13,542	1,264	3,007	2,056	925
Otsego	35,652	5	39	--	10,390	10	--	15,110	490	3,948	1,350	4,311
Presque Isle	47,992	18	449	--	3,730	262	--	27,047	3,227	10,815	14	2,428
Roscommon	41,721	5	42	--	9,044	10	--	22,462	1,643	6,930	1,297	288
Wexford	15,381	--	--	--	4,193	--	--	4,493	478	4,036	884	1,296
Total	844,938	184	2,409	--	108,336	862	--	429,499	41,703	155,857	51,155	54,933
Southern Lower Peninsula												
Allegan	11,589	--	--	--	--	--	--	2,617	--	1,868	7,103	--
Barry	1,899	--	--	--	--	--	--	429	--	286	1,184	--
Berrien	2,231	--	--	--	--	--	--	257	--	408	1,565	--
Cass	2,351	--	--	--	--	--	--	270	--	408	1,672	--
Gratiot	792	--	--	--	--	--	--	159	4	248	--	381
Huron	947	--	--	--	23	--	--	773	23	128	--	--
Ionia	710	--	--	--	--	--	--	82	--	154	474	--
Kalamazoo	1,295	--	--	--	--	--	--	129	--	204	963	--
Kent	5,908	--	--	--	41	--	--	1,038	4	1,078	3,360	387
Montcalm	14,208	--	--	--	70	--	--	3,536	48	3,353	2,579	4,622
Muskegon	14,315	--	--	--	--	--	--	1,917	27	1,727	8,001	2,643
Ottawa	4,162	--	--	--	--	--	--	566	7	765	1,891	932
Sanilac	270	--	--	--	--	--	--	260	--	9	--	--
St Joseph	2,636	--	--	--	--	--	--	300	--	286	2,050	--
Tuscola	472	--	--	--	--	--	--	416	--	56	--	--
Van Buren	2,694	--	--	--	--	--	--	322	--	306	2,066	--
Total	66,480	--	--	--	134	--	--	13,072	114	11,287	32,910	8,966
State total	2,834,399	4,323	79,372	65,660	355,134	66,445	6,352	1,002,665	176,705	779,028	104,790	193,923

(Table 1 continued on next page)

(Table 1 continued)

WISCONSIN

Unit and county 2/	All species	Species group: N. white-cedar	Balsam fir	Hemlock	Pine	Spruce	Tamarack	Aspen	Birch	Maple	Oak	Other hardwood
Northeastern												
Florence	60,608	18	3,340	615	7,267	1,361	154	20,838	4,643	17,970	994	3,407
Forest	125,168	--	4,316	5,568	5,840	2,943	370	45,607	12,218	31,506	3,561	13,241
Langlade	145,894	--	5,167	1,999	6,098	1,894	486	58,275	23,162	33,687	4,143	10,982
Lincoln	114,164	--	2,873	575	7,891	1,100	236	55,369	13,925	16,743	4,951	10,501
Marinette	117,990	1	3,885	541	30,158	1,265	587	44,536	11,699	20,426	1,624	3,266
Menominee	74,377	211	3,111	12,080	10,470	716	268	24,937	2,121	14,416	760	5,287
Oconto	70,756	--	267	149	14,706	159	134	33,191	6,430	12,378	750	2,590
Oneida	124,479	--	3,873	345	14,411	4,285	847	41,201	22,101	20,356	5,982	11,078
Shawano	31,062	--	61	1,172	4,288	48	70	18,209	875	4,322	422	1,594
Vilas	155,411	--	3,147	124	30,512	1,739	568	54,457	26,102	22,679	5,141	10,942
Total	1,019,908	230	30,040	23,167	131,642	15,509	3,721	396,620	123,275	194,483	28,330	72,892
Northwestern												
Ashland	81,276	--	3,101	76	4,107	3,552	701	33,819	12,277	15,744	3,087	4,812
Barron	24,031	--	43	14	1,027	60	--	15,563	1,975	3,366	655	1,327
Bayfield	188,458	--	4,458	41	46,783	2,064	40	89,439	20,432	14,201	5,359	5,643
Burnett	71,483	--	125	--	31,954	92	7	32,130	1,971	3,584	871	751
Douglas	197,474	--	13,144	--	74,278	2,340	194	72,052	22,103	11,241	526	1,598
Iron	162,413	--	3,483	316	2,583	2,723	141	87,820	15,901	30,735	5,715	12,996
Polk	44,479	--	14	14	17,031	13	--	23,352	977	1,418	1,171	490
Price	136,349	--	7,474	757	5,296	3,374	948	64,528	17,267	20,097	5,314	11,294
Rusk	88,579	--	169	67	1,752	294	336	42,510	12,895	18,157	3,646	8,752
Sawyer	166,152	--	5,206	278	12,575	3,700	523	66,827	30,361	32,485	4,905	9,292
Taylor	75,333	--	2,313	1,740	929	596	827	37,547	8,732	13,112	2,472	7,063
Washburn	96,953	--	904	24	29,313	540	95	48,076	7,085	7,886	1,095	1,936
Total	1,332,981	--	40,434	3,325	227,626	19,347	3,812	613,664	151,976	172,027	34,816	65,956
Central												
Adams	77,551	--	30	--	55,323	4	--	5,434	449	847	14,836	626
Chippewa	33,495	--	32	41	1,917	31	--	19,788	2,949	4,684	1,757	2,297
Clark	100,350	--	25	32	4,483	1	--	53,325	9,220	15,790	10,632	6,845
Eau Claire	39,297	--	--	--	12,519	10	--	10,189	3,047	4,994	6,559	1,977
Jackson	90,056	--	30	25	54,428	29	34	13,160	3,641	6,153	9,878	2,677
Juneau	64,399	--	--	3	44,336	5	93	2,401	1,063	2,277	13,380	840
Marathon	71,406	--	677	834	7,177	1,162	30	31,582	4,004	14,018	2,568	9,352
Marquette	12,500	--	6	--	10,371	--	56	355	127	205	1,234	144
Monroe	32,480	--	--	--	19,279	19	--	3,119	1,060	2,309	5,635	1,059
Portage	38,004	--	50	188	21,700	146	248	8,706	668	2,422	2,401	1,476
Waupaca	17,540	--	49	125	6,354	693	51	7,190	304	1,315	350	1,110
Waushara	32,492	--	--	--	28,165	271	187	1,055	239	580	1,681	315
Wood	51,534	--	--	40	19,006	509	--	22,923	1,430	3,247	3,412	967
Total	661,102	--	900	1,287	285,059	2,880	699	179,228	28,200	58,841	74,324	29,684
Southwestern												
Buffalo	8,281	--	806	--	2,364	66	--	3,358	405	646	298	339
Crawford	190	--	--	--	13	--	--	--	15	30	126	6
Dunn	17,219	--	--	--	7,552	111	--	5,314	1,336	1,795	491	619
Grant	4,125	--	--	13	3,951	--	--	36	26	72	13	14
Iowa	1,310	--	--	--	1,066	164	--	69	3	7	1	1
La Crosse	3,804	--	--	--	3,008	153	--	425	37	99	40	42
Lafayette	57	--	--	--	13	--	--	--	7	12	23	2
Pepin	584	--	--	--	79	45	--	390	16	33	8	12
Pierce	943	--	18	--	567	10	--	167	44	70	34	33
Richland	661	--	--	--	355	--	--	--	16	49	221	20
Sauk	9,530	--	--	--	5,501	259	--	429	390	755	1,888	307
St Croix	9,970	--	--	--	5,025	407	--	3,436	370	560	42	131
Trempealeau	9,182	--	45	--	3,935	342	--	2,885	367	571	671	364
Vernon	408	--	16	--	50	--	--	14	22	52	233	21
Total	66,263	--	884	13	33,479	1,558	--	16,523	3,055	4,750	4,088	1,914
Southeastern												
Brown	7,067	--	--	--	897	--	--	5,251	28	206	7	677
Calumet	65	--	--	--	23	--	--	42	--	--	--	--
Columbia	4,510	--	--	--	3,328	11	--	133	90	155	721	71
Dane	389	--	10	--	18	--	--	26	68	103	80	83
Dodge	194	--	--	--	166	--	--	28	--	--	--	--
Door	2,289	--	11	--	17	--	13	442	1,554	186	26	38
Fond Du Lac	527	--	--	--	168	--	--	228	20	34	69	8
Green	57	--	13	--	--	--	--	--	7	10	19	8
Green Lake	1,344	--	--	--	758	--	--	32	103	181	199	71
Jefferson	6,643	--	1,033	243	5,285	41	14	28	--	--	--	--
Kenosha	755	--	--	--	617	125	--	13	--	--	--	--
Kewaunee	324	--	16	23	--	--	--	14	37	202	3	30
Manitowoc	35	--	--	--	11	--	--	--	2	18	--	3
Milwaukee	19	--	--	--	19	--	--	--	--	--	--	--
Outagamie	4,902	--	--	--	547	33	24	1,929	300	1,549	221	299
Ozaukee	77	--	--	--	16	61	--	--	--	--	--	--
Rock	28	--	13	--	16	--	--	--	--	--	--	--
Sheboygan	2,767	--	16	--	2,615	99	--	10	5	8	6	9
Walworth	893	--	--	--	892	--	--	--	--	--	--	--
Washington	932	--	--	--	742	176	14	--	--	--	--	--
Waukesha	823	--	--	--	791	--	--	11	9	10	--	2
Winnebago	50	--	--	--	--	--	--	15	3	6	25	1
Total	34,690	--	1,111	266	16,927	547	64	8,202	2,226	2,667	1,376	1,302
State total	3,114,945	230	73,370	28,058	694,733	39,841	8,295	1,214,236	308,732	432,768	142,936	171,747
Total Lake States	8,759,419	4,553	350,478	93,717	1,171,888	256,243	26,864	4,320,190	596,122	1,228,533	247,937	462,893

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